

### **REMARKS**

This Application has been carefully reviewed in light of the Office Action mailed May 31, 2006 (the "Office Action"). At the time of the Office Action, Claims 1-25 were pending in the Application. The Examiner allows Claims 1-13 and rejects Claims 14, 22, 24, and 25. The Examiner objects to Claim 23. Applicants amend Claims 14 and 21. As described below, Applicants believe all claims to be allowable over the cited references. Therefore, Applicants respectfully request reconsideration and full allowance of all pending claims.

### **Interview Summary**

Applicants thank the Examiner for conducting the telephone interview on August 21, 2006, and for the thoughtful consideration of this case. During the telephone interview and following email communications, Applicants and Examiner discussed amended Claim 14 with regard to the proposed *Parruck-Park* combination. Applicants understand that the Examiner agrees that *Parruck-Park* does not teach or suggest the invention recited in amended Claim 14.

### **Allowable Subject Matter**

Applicants note with appreciation the Examiner's indication that Claims 1-13 are allowable. Claims 1-13 have not been amended and, therefore, remain in condition for allowance.

Applicants also note with appreciation the Examiner's indication that Claim 23 would be allowable if rewritten in independent form including all of the features of the base claim and any intervening claims. However, as discussed below, Applicants believe that independent Claim 21, from which Claim 23 depends, is also allowable. Therefore, Applicants have not amended Claim 23.

### **Section 102 Rejections**

The Examiner rejects Claims 14-20 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Application Publication No. 2001/0001608 issued to Parruck et al. ("*Parruck*"). Because Applicants believe that *Parruck* does not disclose, teach, or suggest each and every

limitation of Applicants' claims, Applicants respectfully traverse the rejection of Claims 14-20 for the reasons stated below.

Independent Claim 14 has been amended to include certain features and operations that are similar to those recited in independent Claim 1, which the Examiner has indicated is allowable. For example, Claim 14 has been amended to recite "providing a plurality of schedulers for selective coupling to a port for a transmission line" and "using an interface controller in communication with the plurality of schedulers to selectively and simultaneously couple at least two of the plurality of schedulers to the port and to allocate a disparate portion of a plurality of port transmission slots to each of the schedulers coupled to the port based on hierarchical levels assigned to each port transmission slot." During the telephone interview conducted on August 21, 2006 and following email communications, Applicants and Examiner discussed amended Claim 14. Applicants understand that the Examiner agrees that Claim 14, as amended, is allowable over the cited references.

For at least these reasons, Applicants respectfully request reconsideration and allowance of Claim 14, together with Claims 15-20 that depend therefrom.

### **Section 103 Rejections**

The Examiner rejects Claims 21-22 and 24-25 under 35 U.S.C. § 103(a) as being unpatentable over *Parruck* in view of U.S. Patent Application Publication No. 2002/0036981 issued to Park ("*Park*"). Because the proposed *Parruck-Park* combination does not disclose, teach, or suggest each and every element recited in Applicants' claims, Applicants request reconsideration and allowance of Claims 21-22 and 24-25.

For example, the proposed *Parruck-Park* combination does not disclose, teach, or suggest "receiving a request to transmit specified traffic in a virtual tunnel having a bandwidth," as recited in Claim 21. In the Office Action, the Examiner acknowledges that *Parruck* does not disclose, teach, or suggest the Applicants' step of "receiving a request;" rather, the Examiner relies upon *Park* for disclosure of the recited request. (Office Action, page 3). The portion of *Park* identified by the Examiner as disclosing the received request merely discloses, however, that "when the new connection admission is accepted as a result

of the decision of its request, the Connection Admission Control portion 2 informs the connection admission to one subscriber terminal 1 and the ATM network 3 so that the subscriber terminal 1 is connected to the ATM network.” (Page 1, paragraph 9, lines 1-6). For processing such a request, however, *Park* discloses that “[t]he ATM network is provided with an efficient network controller to control a traffic network, effectively, **even if the exact characteristics of traffic signal sources are unknown and/or the Quality-Of-Service is changed according to the elapse of time.**” (Page 1, paragraph 4, lines 12-16, emphasis added). Thus, there is no indication in *Park* that the received request is analogous to “a request to transmit specified traffic in a virtual tunnel having a bandwidth,” as recited in Claim 21. To the contrary, *Park* further describes that “[i]n order to operate the Connection Admission Control, there are methods using an equivalent bandwidth, a burst model and a traffic measurement.” (Page 1, paragraph 5, lines 11-13). Specifically, “[t]he equivalent bandwidth method comprises steps for approximating a bit rate generated at a multi-connection with a fluid-flow model, calculating the equivalent bandwidth of respective calls and determining whether the connection is admitted after checking if the equivalent bandwidth exceeds the residue band width of the connection demand call.” (Page 1, paragraph 6, lines 1-7). Accordingly, Applicants submit that *Park* does not disclose, teach, or suggest “receiving a request to transmit specified traffic in a virtual tunnel having a bandwidth,” as recited in Claim 21.

As a further example of the deficiencies of the *Parruck-Park* combination, Applicant submits that the proposed *Parruck-Park* combination does not disclose, teach, or suggest the following combination of claim elements recited in Applicants’ Claim 21:

- “identifying an hierarchical set of port transmission slots providing at least the bandwidth required for the specified traffic associated with the received request;”
- “allocating the hierarchical set of port transmission slots to a selected one of a plurality of transmission line interfaces, each transmission line interface having a corresponding scheduler coupled thereto, the scheduler associated with the selected transmission line interface comprising a selected scheduler; and”
- “using the selected scheduler of the selected one of the plurality of transmission line interfaces to transmit the specified traffic in the hierarchical set of port transmission slots allocated to the selected

transmission line interface based on hierarchical levels assigned to each port transmission slot.”

In the Office Action, the Examiner relies on *Parruck*, as the primary reference, for disclosure of the recited claim elements. (Office Action, pages 2-3). Specifically, the Examiner identifies traffic sorters 205 of *Parruck* as being analogous to Applicants’ plurality of schedulers and scheduler 212 of *Parruck* as being analogous to Applicants’ recited port. Applicants are unable to determine, however, which elements of *Parruck*’s Figure 4 are analogous to Applicants’ recited “hierarchical set of port transmission slots” and “plurality of transmission line interfaces.”

With regard to similar elements recited in Claim 14, the Examiner relies on Paragraph 57, Paragraph 50 (last four lines) and paragraph 58 (lines 1-3) of *Parruck*. The cited portions of *Parruck* merely provide, however, that “by prioritizing by groups of VC queues traffic shaping is achieved with fewer resources.” (Page 4, paragraph 50, last four lines). “The outputs of several traffic shapers feed into scheduler 212. Scheduler 212 includes several round robin routers 207 and a priority scheduler 210. The output of the priority scheduler is the output of a port of the ATM switch to one of the physical connections.” (Page 4, paragraph 57). “As can be appreciated, the structure of traffic shaping matrix (102 resembles a tree structure. This is due to the hierarchical structure of the traffic shaping matrix.” (Page 4, paragraph 58, lines 1-3). There is no disclosure in the cited portions of *Parruck*, however, of “identifying an hierarchical set of port transmission slots providing at least the bandwidth required for the specified traffic associated with the received request” and “allocating the hierarchical set of port transmission slots to one of a plurality of transmission line interfaces, each transmission line interface having a corresponding scheduler coupled thereto,” as recited in Applicants’ Claim 21.

Furthermore, if traffic shapers 205 of *Parruck* are analogous to Applicants’ recited “plurality of transmission line interfaces . . . [each] having a corresponding scheduler coupled thereto,” as suggested by the Examiner, Applicants submit that a selected traffic shaper 205 is not used “to transmit the specified traffic in the hierarchical set of port transmission slots allocated to the selected transmission line interface based on hierarchical levels assigned to each port transmission slot,” as recited in Claim 21. To the contrary, *Parruck* discloses “the

grouping of VC queues with similar data rates such that their traffic may be shaped by a single traffic shaper.” (Page 4, paragraph 48, lines 6-8). Furthermore, “each round robin router 207 [of scheduler] is assigned a priority, and each VC feeding into the same round robin router has the same priority.” (Page 4, paragraph 58, lines 6-8). Because each VC feeding into a round robin router 207 of scheduler 212 has the same priority, *Parruck* necessarily requires that each VC feeding into each traffic shaper 205 must also have the same priority. (See Figure 4). Accordingly, any prioritization is performed by priority scheduler 210 of the single scheduler 212, which is described as “schedul[ing] the transmission of cells from the round robin routers based upon priority,” rather than by the traffic sorters 205. (Page 4, paragraph 58, lines 1-6). There is no disclosure in *Parruck* that traffic sorters 205 are used to “transmit the specified traffic in the hierarchical set of port transmission slots based on hierarchical levels assigned to each port transmission slot,” as recited in Claim 21.

For at least these reasons, Applicants respectfully request reconsideration and allowance of Claim 21, together with Claims 22 and 24-25 that depend therefrom.


**CONCLUSION**

Applicants have made an earnest attempt to place this case in condition for allowance. For the foregoing reasons, and for other reasons clearly apparent, Applicants respectfully request full allowance of all pending Claims.

If the Examiner feels that a telephone conference or an interview would advance prosecution of this Application in any manner, the undersigned attorney for Applicants stands ready to conduct such a conference at the convenience of the Examiner.

Applicants believe no fee is due. However, should there be a fee discrepancy, the Commissioner is hereby authorized to charge any fees or credit any overpayments to Deposit Account No. 02-0384 of Baker Botts L.L.P.

Respectfully submitted,  
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